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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,703	10/23/2001	Minghua Chen	TRANDIM.006A	2516
20995	7590	09/28/2005	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			FERRIS, DERRICK W	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			2663	

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/003,703	CHEN ET AL.	
	Examiner	Art Unit	
	Derrick W. Ferris	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) 45-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. **Claims 1-44**, drawn to preventing collisions for a first and a second *protocol*, classified in class 370, subclass 466.
 - II. **Claims 45-52**, drawn to preventing collisions for a plurality of *traffic types*, classified in class 455, subclass 63.2.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as combination (Invention I) and subcombination (Invention II). Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination (Invention I) as claimed does not require the particulars of the subcombination as claimed because Invention II (e.g., in claim 45) further recites ranking the traffic types and then ordering the traffic types to maintain quality of service for each traffic type within the service level which is not required by invention I (i.e., Invention I may prioritize the traffic types as recited e.g., in claim 29 but Invention I does not rank the traffic types and then order the traffic types for each traffic type within the service level). The subcombination has separate utility such as ranking and ordering of traffic types. In particular, note that claims 49 and 50 (which are also objected to) associate traffic types with either a first protocol or a second protocol but do not further recite a second networking protocol where Invention I clearly recites a second networking protocol (i.e., in expanded form: the first

Art Unit: 2663

and second traffic type are related to a Bluetooth protocols or the first *and* second traffic types are related to IEEE 802.11 wireless local area networking protocols). In addition, note that e.g., in claims 17-32 there is a clear distinction between network protocols (see e.g., claim 17) and traffic types (see e.g., claim 26-32) such that a traffic type is not a networking protocol.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Michael H. Trenholm on 9/26/2005 a provisional election was made for to prosecute the invention of group I, claims 1-44. Affirmation of this election must be made by applicant in replying to this Office action. Claims 45-52 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Objections

6. **Claim 50** is objected to because of the following informalities: claim 50 is the same as claim 49. Appropriate correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2663

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. **Claims 1-29 and 33-44** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent Application 2002/0061031 A1 to *Sugar et al.* ("*Sugar*").

As to **claim 1**, *Sugar* teaches applicant's coordination point 117 as multi-protocol device MPD 12. As such, the MPD 12 acquires transmission characteristics for the transmission of a first protocol and the transmission of a second wireless protocol with respect to Additional Collision Avoidance Techniques starting e.g., at page 5. In particular, the MPD 12 monitors WLAN traffic metrics (i.e., transmission characteristics) used to arbitrate WLAN access between different protocols, see e.g., paragraphs 0062 and 0064. Specifically, in order for arbitration to take place, the MPD must be aware of the two or more protocols that the MPD will arbitrate. Thus, with respect to analyzing the transmissions characteristics for the transmission of the first protocol and the transmission of the second protocol and moderating the transmission characteristics to determine an imminent collision between the transmission of the first protocol and the transmission of the second protocol, the MPD monitors and then arbitrates the protocols based on the received traffic metrics. In particular, the above is done in order to provide similar configurations of the CSMA parameters (for each protocol) such as packet duration, guard time, and back-off time

As to **claim 2**, with respect to ordering of packets see monitoring the BER with respect to acknowledgements where acknowledgments determining the ordering of

packets, see e.g., paragraph 0059. In addition, since timing information is obtained, the packets are also ordered, see e.g., paragraph 0063 on page 5.

As to **claim 3**, the MPD time aligns the protocols, see e.g., paragraph 0063 on page 5 and paragraph 0017 on page 10 with respect to timing.

As to **claim 4**, since frequency hopping is a consideration with interference, the MPD tracks the frequency that the packet is being transmitted, received on, see e.g., figures 17a and 17b, paragraph 0099 on page 9 and paragraph 0117 on page 10.

As to **claim 5**, the MPD monitors the channels where the channel is used to send the data, see e.g., paragraph 0044 on page 3.

As to **claims 6-7**, with respect to FHSS see e.g., paragraph 0042 on page 3 and paragraph 0066 on page 6 where Bluetooth uses FHSS.

As to **claims 8-9**, with respect to DSSS see e.g., paragraph 0042 on page 3 and paragraph 0066 on page 6 where 802.11 uses DSSS.

As to **claim 10**, with respect to overlapping see e.g., paragraph 0049 on page 4.

As to **claims 11-12**, with respect to fixed frequency and alternating frequencies, see e.g., paragraph 0066 on page 6 where Bluetooth uses alternating-frequencies and 802.11 uses fixed frequencies.

As to **claims 13-14**, with respect to quality of services, see e.g., paragraphs 0054 on page 4, and paragraph 0089 on page 7.

As to **claims 15-16**, with respect to an acceptable range, see e.g., monitoring error rates where the service level is reflected by the error rate at e.g., paragraph 0059 on page

5. Examples include but are not limited to e.g., paragraphs 0084 on page 7, paragraph 0094 on page 8, and paragraph 0105 on page 9.

As to **claim 17**, see similar rejection to claim 1.

As to **claim 18**, see similar rejection to claim 2.

As to **claim 19**, see similar rejection to claim 3.

As to **claim 20**, see similar rejection to claim 4.

As to **claim 21**, see similar rejection to claim 5.

As to **claim 22**, see similar rejection to claim 6.

As to **claim 23**, see similar rejection to claim 8.

As to **claim 24**, see similar rejection to claim 10.

As to **claim 25**, see similar rejection to claim 11.

As to **claim 26**, see similar rejection to claim 13.

As to **claim 27**, with respect to voice and data, see e.g., paragraph 0054 on page 4.

As to **claim 28-29**, see similar rejection to claim 13.

As to **claim 33**, *Sugar* teaches applicant's coordination point 117 as multi-protocol device MPD 12. As such, the MPD 12 identifies the transmission statistics during exchange of information between the plurality of data transfer nodes by monitoring certain metrics, see e.g., paragraph 0062 and 0064 on page 5. With respect to subsequently accessing the transmission statistics to determine if an acceptable quality of service is maintained, the MPD 12 applies the collision avoidance techniques if the MPD 12 determines that there is a "likelihood" of interference, see e.g., paragraph 0062 on page 5. In addition, see e.g., paragraphs 0084 on page 7, paragraph 0094 on page 8, and

Art Unit: 2663

paragraph 0105 on page 9 with respect to identifying and assessing transmission statistics. Finally, with respect to a synchronization module which moderates information exchange in at least one of the frequency-overlapping protocols to maintain quality of service, see e.g., paragraph 0064 on page 5 with respect to maintaining similar configurations and paragraph 0117 on page 10 with respect to timing for disparate networks.

As to **claim 34**, see similar rejection to combined claims 16 and 27.

As to **claims 35-36**, see similar rejection to claim 16.

As to **claim 37**, see similar rejection to claim 1.

As to **claim 38**, see similar rejection to claim 27.

As to **claim 39**, see similar rejection to claim 27.

As to **claim 40**, see similar rejection to claim 6.

As to **claim 41**, see similar rejection to claim 7.

As to **claim 42**, see similar rejection to claim 8.

As to **claim 43**, see similar rejection to claim 9.

As to **claim 44**, see similar rejection to combined claims 11 and 12.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2663

10. **Claims 30-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application 2002/0061031 A1 to *Sugar et al.* ("*Sugar*") in view of U.S. Patent No. 6,405,257 B1 to *Gersht et al.* ("*Gersht*").

As such to **claims 30-32**, *Sugar* discloses supporting QoS, see e.g., paragraph 0054 on page 4 and paragraph 0089 on page 7.

Sugar is silent or deficient to the further limitation of maintaining specific quality statistics which includes packet loss rate, packet delays and throughput as further recited in the claims.

Gersht teaches the further recited limitation above at e.g., column 5, lines 5-20.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Sugar* by clarifying that quality service parameters are well known in the art and such parameters include packet loss rate, packet delays and throughput as is further known in the art.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to control congestion. In particular, *Gersht* cures the above-cited deficiency by providing a motivation found at e.g., column 5, line 5-20.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

Art Unit: 2663


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663


DWF

DERRICK FERRIS
PATENT EXAMINER


9/27/05